

ABSTRACT

5 The present invention is directed to novel telomerase enzyme and
telomerase reverse transcriptase nucleic acids and amino acids. In particular, the present
invention is directed to nucleic acid and amino acid sequences encoding telomerase
enzyme subunits and telomerase reverse transcriptase obtained from *Euplotes*
Schizosaccharomyces, other yeast, *Tetrahymena*, other fungi, mouse and other mammals,
including human. The present invention is also directed to polypeptides comprising these
10 telomerase enzyme and TRT protein subunits, as well as functional polypeptides and
ribonucleoproteins that contain these subunits.

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